CDF Operations Report

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All Experimenters Meeting

This Week's Stores

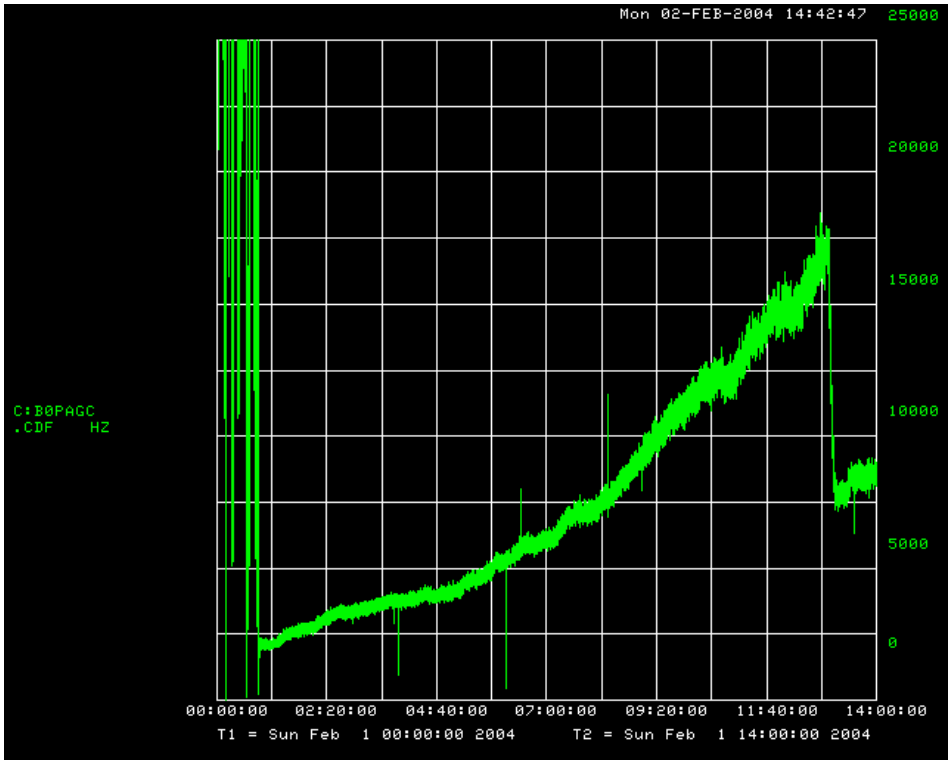
Date	Store	Inst Lum (initial)	Delivered Lum [nb^{-1}]	Lum to tape nb^{-1} (ε)	Comment
Mo 1/26	3195	44.7e30	325	199 (61%)	Vacuum, high losses
Tu 1/27	3197	41.9e30	1925	1658 (86%)	
Th 1/29	3206	33.9e30	1032	896 (87%)	Corr. Elem. trip
Sa 1/31	3210	50.4e30	1577	1203 (76%)	Abort gap losses, trig test
Su 2/1	3212	53.6e30	2595	2265 (87%)	RF failure
Total			7454	6221 (83%)	

Detector Status

- We made use of the Monday and Friday access times:
  - –Silicon investigations and fixes
  - –COT readout electronics board
  - –CEM HV
  - –Measured I/V curves for diode dosimeters
  - –Investigated a problem with lighting in the hall
- We redistributed the data input to the event builder to better balance the data load and allow higher rates into level 3.
  - – 275Hz → 330Hz

Abort Gap Losses

- The rate of abort gap losses is monitored for the protection of the silicon detector.
  - –We worry if the rate exceeds 20kHz
  - –At ~15kHz we call the MCR and ask that they try to lower the rates
- For recent stores, the rates begin low (few kHz) but climb steadily.
- Scraping helps -- collimator E03 is usually effective
- Contributes to deadtime
- We are concerned that we understand neither why the losses rise, nor why scraping helps.



Efficiency

- Several improvements have improved our data taking efficiency (especially at high luminosity):
  - –Improvements to our error recovery procedures (rebooting alpha midrun)
  - –Recent upgrade of the Level 3 farm
  - –Redistributing the load to the event builder
  - –Modifications to the trigger code
  - –For this morning's store at 58e30, we ran our standard trigger and had 10% deadtime
  - –For the past week, our overall efficiency reached 83%
- More improvements are in development
  - –Level 2 muon code
  - –More efficient DSP code

Summary

- The CDF detector is running well
  - –We are solving the many small problems that effected data taking at the beginning of the year
  - –Data taking efficiency is rising towards above 85%
  - –We welcome the improving Tevatron luminosity